



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,853	08/04/2003	William C. Paluch	PAT013US	6606

32656 7590 07/12/2005

W-H ENERGY SERVICES, INC.
10370 RICHMOND AVENUE
SUITE 990
HOUSTON, TX 77042

EXAMINER

GAY, JENNIFER HAWKINS

ART UNIT PAPER NUMBER

3672

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,853

Applicant(s)

PALUCH ET AL.

Examiner

Jennifer H. Gay

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/4/03, 11/15/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the drill bit jet as recited in claim 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because Figures 3A and 5A include section lines that are labeled with alphanumerically instead of with Arabic or Roman numerals (see 37 CFR 1.84(h)(3)). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

Art Unit: 3672

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 200, 223, 225, 234, 236, and 238. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 222B, 223A, 223B, 225A, 225B, 234A, 234B, 236A, 236B, 238A, 238B, and 335. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The abstract of the disclosure is objected to because the abstract contains the implied phrases "is provided" in line 1 and "is also provided" in line 10. The abstract is also greater than 150 words. Correction is required. See MPEP § 608.01(b).

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

7. Claims 1, 6-9, 14, 15, 22, 25, 29, 32, 33, 35, 36, and 38 are specifically objected to as being replete with errors. Examples of such informalities are as follows. All of the claims should be reviewed for similar informalities and the appropriate corrections made. Appropriate correction is required.

- Claim 1 – in line 4 "each sample tank" should be changed --the at least one sample tank-- as "each" requires more than one and "at least one", which was previously used to define the sample tank, encompasses just one sample tank, in line 6 "at least one of the sample tanks" should be changed to --the at least one sample tank-- for same reasoning as indicated above, and in line 8 "the sample tank" should be changed to --the at least one sample tank--.
- Claims 6 and 29 – "further comprising" should be changed to --wherein the at least one sample tank comprises--.

Art Unit: 3672

- Claims 7 and 38 – “at least one of the sample tanks” should be changed to --at least one of the plurality of sample tanks--.
- Claim 8 – “said at least one sample tank” should be changed to --said at least one of the plurality of sample tanks--.
- Claim 9 – “each sample tank” should be changed to --the at least one sample tank--.
- Claims 14 and 32 – “at least one of the sample tanks” should be changed to --the at least one sample tank--.
- Claims 15 and 33 – “said insulated sample tanks have” should be changed to --said at least one insulated sample tank has--.
- Claims 22, 35 and 36 – changes similar to those in claim 1 should be made.
- Claim 25 – “at least one of the sensors” should be changed to --the at least one sensor--.
- Claim 35 – “a drill string” in line 10 should be changed to --the drill string--.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-13, 18-31, 34-37 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ringgenberg et al. (US 5,799,733) in view of Michaels et al. (US 5,303,775).

Regarding claims 1, 22, 35: Ringgenberg et al. discloses a wellbore tool. The tool includes the following features:

- A drill string (18:44-46) having a drill bit disposed on the end thereof.
- A formation evaluation tool **280** disposed on the drill string.
- A formation fluid sampling tool **2004** disposed on the drill string where the sampling tool includes the following features:

- At least one sample tank **234** mounted in a tool collar.
- The tool collar includes a through bore and is operatively couple with a drill string (18:44-46) such that the at least one sample tank receives a formation fluid sample.
- A packer element **204** for sealing the wall of the wellbore around the tool where the packer is movable between a sealed and unsealed position.
- A sample inlet port **238** connected to the sample chamber by an inlet passageway **232**

Ringgenberg et al. discloses all of the limitations of the above claims except for the at least one sample tank including a internal fluid separator that splits the tank into a sample chamber and a pressure balancing chamber.

Michaels et al. discloses a tool similar to that of Ringgenberg et al. Michaels et al. further teaches a sample tank that includes an internal fluid separator **128** for splitting the tank into a sample chamber **138** and a pressure balancing chamber **140** where the pressure balancing chamber is in fluid communication with the drilling fluid exterior to the tool collar (9:27-29).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the at least one sample tank of Ringgenberg et al. to include the internal fluid separator taught by Michaels et al. in order to have maintained the fluid sample above the bubble point thus preventing fluid separation prior to being tested.

Regarding claims 2, 28: The pressure balancing chamber is in fluid communication with drilling fluid exterior to the tool collar.

Regarding claims 3, 29: The pressure balancing chamber is also in fluid communication with drilling fluid in the through bore of the tool.

Regarding claim 4: The drilling fluid exterior to the pressure balancing chamber would inherently be about the same as the hydrostatic pressure in the wellbore unless drilled in underbalanced or overbalanced conditions.

Regarding claim 5: Though neither Ringgenberg et al. nor Michaels et al. disclose that the drilling fluid has a pressure that exceeds the hydrostatic pressure of the wellbore, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have drilled the wellbore in overbalanced conditions in order to have prevented formation fluid from entering the wellbore prematurely as well as to have stabilized the walls of the wellbore.

Regarding claims 6, 29: Ringgenberg et al. discloses the use of a plurality of sample tanks.

Regarding claims 7-9: The sample tanks are disposed co-axially with the tool collar within the through bore.

Regarding claims 10, 13, 30, 31, 39: The tool further includes a pressure control assembly 212 and 236 to control the flow of drilling fluid between the through bore and the wellbore.

Regarding claim 11: The pressure control assembly includes at least one drill bit jet; the examiner notes that the assembly includes a drill bit which would inherently include a drill bit nozzle or jet.

Regarding claim 12: The pressure control assembly includes at least one discharge port, i.e. a nozzle in the drill bit 212, that is connected to the through bore by a corresponding outlet passageway that is controlled by a valve 236.

Regarding claim 18: The internal fluid separator of Michaels et al. includes a seal 132, 134 deployed between the sample chamber and the pressure balancing chamber.

Regarding claim 19: The tool includes an electronic controller (23:11-15).

Regarding claims 20, 37: The tool includes the formation evaluation tool or a measurement while drilling tool 280.

Regarding claims 21, 34: The tool includes a pump 240.

Regarding claim 23: The packer element includes a first 206 and second 208 packer element with the sample inlet disposed therebetween.

Regarding claims 24, 25: The tool includes a fluid identification module that includes at least one sensor 235 for sensing a physical fluid property such as resistivity (19:35-37).

Regarding claim 26: The tool includes a first fluid passageway connecting the fluid identification module to the sample chamber (Figures 3A and 3B) and a second fluid passage 256 connecting the fluid identification module to an output port for expelling fluid from the tool.

Regarding claim 36: Ringgenberg et al. further discloses the method for using the above tool that involves providing the tool, coupling the tool to the drill string, positioning the tool in the wellbore at a location of interest, pumping formation fluid into the sample chamber.

10. Claims 14-17, 32, 33, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ringgenberg et al. in view of Michaels et al. as applied to claims 1, 22, and 36 above, and further in view of Brown et al. (US 5,901,788).

Regarding claims 14, 32: Ringgenberg et al. and Michaels et al. disclose all of the limitations of the above claims except for the at least one sample tank being insulated.

Brown et al. discloses a sampling tool similar to that of Ringgenberg et al. Brown et al. further teaches insulating the sample tanks (4:15-20).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the at least one sample tank of Ringgenberg et al. in view of Michaels et al. so that the at least one tank was insulated as taught by Brown et al. in order to have minimized heat loss from the sample thus maintaining the sample in a single phase (2:32-55).

Regarding claim 15: Brown et al. discloses all of the limitations of the above claims except for the insulation having an r-value greater than or equal to about 12. However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have formed the sample tanks of Ringgenberg et al. in view of Michaels et al. and Brown et al. with an insulation having an r-value greater than or equal to about 12, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 16, 33, 38: Ringgenberg et al. and Michaels et al. disclose all of the limitations of the above claims except for the tool including a heating module for heating the at least one sample tank.

Brown et al. further teaches a heating module 36 for heating the sample chamber.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the tool of Ringgenberg et al. in view of Michaels et al. to include a heating module as taught by Brown et al. in order to have minimized heat loss from the sample thus maintaining the sample in a single phase (2:32-55, 60-65).

Regarding claim 17: The heating module of Brown et al. is an electrical resistance heater.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1, 2, 6-8, 14-17, 20-26, 29, 32, 33, 36, and 38 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

Art Unit: 3672

claims 1, 3, 5-7, 10, 16, 18, 25-30, and 37 of copending Application No. 10/911,357 in view of Michaels et al. (US 5,303,775).

The above claims of the instant invention recite essentially the same subject matter as the claims of Application No. 10/911,357 except that Application No. 10/911,357 does not recite that the sample chamber includes a fluid separator.

Michaels et al. discloses a tool similar to that of Ringgenberg et al. Michaels et al. further teaches a sample tank that includes an internal fluid separator **128** for splitting the tank into a sample chamber **138** and a pressure balancing chamber **140** where the pressure balancing chamber is in fluid communication with the drilling fluid exterior to the tool collar (9:27-29).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the at least one sample tank of Ringgenberg et al. to include the internal fluid separator taught by Michaels et al. in order to have maintained the fluid sample above the bubble point thus preventing fluid separation prior to being tested.

The specific correlation is as follows:

- Claims 1, 2, 14, and 16 – Claims 1 and 18 of U.S. Application No. 10/911,357.
- Claim 6 – Claim 5 of U.S. Application No. 10/911,357.
- Claims 7 and 8 – Claim 6 of U.S. Application No. 10/911,357.
- Claim 15 – Claim 7 of U.S. Application No. 10/911,357.
- Claim 17 – Claim 10 of U.S. Application No. 10/911,357.
- Claim 20 – Claim 16 of U.S. Application No. 10/911,357.
- Claim 21 – Claim 3 of U.S. Application No. 10/911,357.
- Claims 22, 32, and 33 – Claim 25 of U.S. Application No. 10/911,357.
- Claim 23 – Claim 26 of U.S. Application No. 10/911,357.
- Claim 24 – Claim 27 of U.S. Application No. 10/911,357.
- Claim 25 – Claim 28 of U.S. Application No. 10/911,357.
- Claim 26 – Claim 29 of U.S. Application No. 10/911,357.
- Claim 29 – Claim 30 of U.S. Application No. 10/911,357.
- Claims 36 and 38 – Claim 37 of U.S. Application No. 10/911,357.

This is a provisional obviousness-type double patenting rejection.

Art Unit: 3672

Conclusion

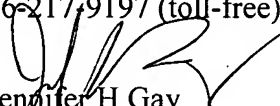
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

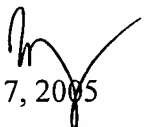
The remaining references made of record disclose various wellbore fluid sampling tools.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H. Gay whose telephone number is (571) 272-7029. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jennifer H Gay
Patent Examiner
Art Unit 3672

JHG 
July 7, 2005